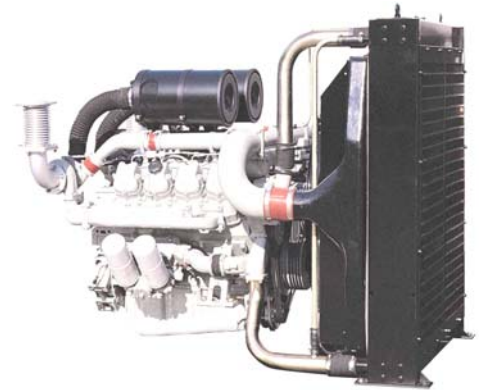


# P158LE-1 G-DRIVE

## ◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Continuous Power	332	452
	Prime Power	366	498
	Standby Power	402	546
1500	Continuous Power	297	403
	Prime Power	327	444
	Standby Power	362	492



Note : -. The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.

-. Ratings are based on ISO 8528.

→ **Prime power** available at variable load. The permissible average power out put (during 24h period) shall not exceed 70% of the prime power rating.

→ **Standby power** available in the event of a main power network failure. No overload is permitted.

## ◎ MECHANICAL SYSTEM

- Engine Model P158LE-1
- Engine Type V-type 4 cycle, water cooled  
Turbo charged & intercooled (air to air)
- Combustion type Direct injection
- Cylinder Type Replaceable wet liner
- Number of cylinders 8
- Bore x stroke 128(5.04) x 142(5.59) mm(in.)
- Displacement 14.618(892.0) lit.(in<sup>3</sup>)
- Compression ratio 15 : 1
- Firing order 1-5-7-2-6-3-4-8
- Injection timing 16° BTDC
- Compression pressure Above 28 kg/cm<sup>2</sup>(398 psi) at 200rpm
- Dry weight Approx. 950 kg (2,094 lb)
- Dimension (LxWxH) 1,484 x 1,389 x 1,161.5 mm  
(58.4 x 54.7 x 45.7 in.)
- Rotation Counter clockwise viewed from Flywheel
- Fly wheel housing SAE NO.1
- Fly wheel Clutch NO.14

## ◎ MECHANISM

- Type Over head valve
- Number of valve Intake 1, exhaust 1 per cylinder
- Valve lashes at cold Intake 0.25mm (0.0098 in.)  
Exhaust 0.35mm (0.0138 in.)

## ◎ VALVE TIMING

- |                 | Opening      | Close        |
|-----------------|--------------|--------------|
| ○ Intake valve  | 24 deg. BTDC | 36 deg. ABDC |
| ○ Exhaust valve | 63 deg. BBDC | 27 deg. ATDC |

## ◎ FUEL CONSUMPTION

- |                         | 1,500 rpm | 1,800 rpm |
|-------------------------|-----------|-----------|
| ○ Prime Power (lit/hr)  | 21.0      | 25.2      |
| 25%                     | 40.0      | 46.5      |
| 50%                     | 58.4      | 67.5      |
| 75%                     | 78.7      | 91.3      |
| 100%                    | 78.7      | 91.3      |
| ○ Standby Power (lit/h) | 23.1      | 27.3      |
| 25%                     | 43.7      | 50.3      |
| 50%                     | 64.7      | 74.2      |
| 75%                     | 88.3      | 101.0     |
| 100%                    | 88.3      | 101.0     |

## ◎ FUEL SYSTEM

- Injection pump Bosch in-line "P" type
- Governor Electric type
- Feed pump Mechanical type
- Injection nozzle Multi hole type
- Opening pressure 285 kg/cm<sup>2</sup> (4,054 psi)
- Fuel filter Full flow, cartridge type
- Used fuel Diesel fuel oil

## ◎ LUBRICATION SYSTEM

- Lub. Method Fully forced pressure feed type
- Oil pump Gear type driven by crankshaft
- Oil filter Full flow, cartridge type
- Oil pan capacity High level 28 liters ( 7.40 gal.)  
Low level 26 liters ( 6.86 gal.)
- Angularity limit Front down 35 deg.  
Front up 35 deg.  
Side to side 35 deg.
- Lub. Oil Refer to Operation Manual

# P158LE-1 G-DRIVE

### ◎ COOLING SYSTEM

- Cooling method            Fresh water forced circulation
- Water capacity            20 liters ( 5.28 gal.)  
(engine only)
- Pressure system           Max. 0.9 kg/cm<sup>2</sup> ( 12.8 psi)
- Water pump                Centrifugal type driven by belt
- Water pump Capacity      410 liters ( 108.2 gal.)/min  
at 1,800 rpm (engine)
- Thermostat                Wax – pellet type  
Opening temp. 71°C  
Full open temp. 85°C
- Cooling fan                Blower type, plastic  
915 mm diameter, 7 blade

### ◎ ELECTRICAL SYSTEM

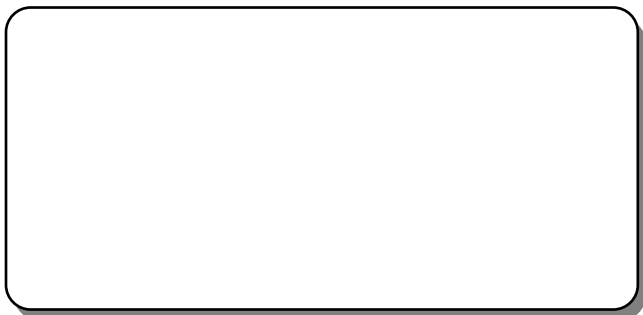
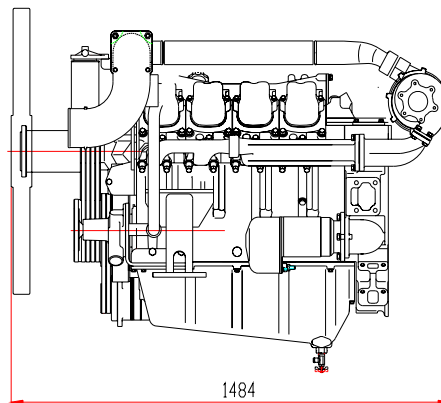
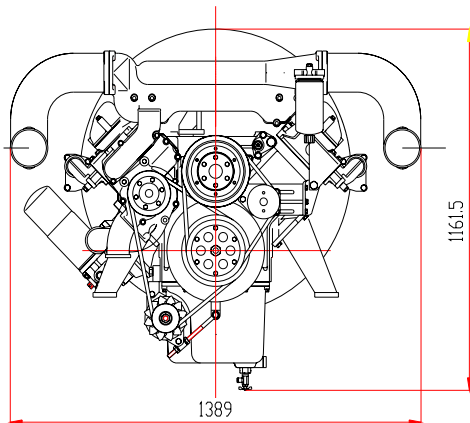
- Charging generator      24V x 45A alternator
- Voltage regulator        Built-in type IC regulator
- Starting motor            24V x 7.0kW
- Battery Voltage            24V
- Battery Capacity         200 AH (recommended)
- Starting aid (Option)    Block heater

### ◎ ENGINEERING DATA

○ Water flow	342 liters/min @1,500 rpm
○ Heat rejection to coolant	34.3 kcal/sec @1,500 rpm
○ Heat rejection to CAC	12.4 kcal/sec @1,500 rpm
○ Air flow	23.5 m <sup>3</sup> /min @1,500 rpm
○ Exhaust gas flow	59.5 m <sup>3</sup> /min @1,500 rpm
○ Exhaust gas temp.	520 °C @1,500 rpm
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○ Water flow	410 liters/min @1,800 rpm
○ Heat rejection to coolant	35.8 kcal/sec @1,800 rpm
○ Heat rejection to CAC	16.6 kcal/sec @1,800 rpm
○ Air flow	31.1 m <sup>3</sup> /min @1,800 rpm
○ Exhaust gas flow	73.5 m <sup>3</sup> /min @1,800 rpm
○ Exhaust gas temp.	500 °C @1,800 rpm
<hr/>	
○ Max. permissible restrictions	
-. Intake system	220 mmH <sub>2</sub> O initial 635 mmH <sub>2</sub> O final
-. Exhaust system	600 mmH <sub>2</sub> O max.

### ◆ CONVERSION TABLE

in. = mm x 0.0394	lb/ft = N.m x 0.737
PS = kW x 1.3596	U.S. gal = lit. x 0.264
psi = kg/cm <sup>2</sup> x 14.2233	kW = 0.2388 kcal/s
in <sup>3</sup> = lit. x 61.02	lb/PS.h = g/kW.h x 0.00162
hp = PS x 0.98635	cfm = m <sup>3</sup> /min x 35.336
lb = kg x 2.20462	



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※ Specifications are subject to change without prior notice